

U.S. Patent Application Serial No. 10/679,296
Amendment filed March 14, 2006
Reply to OA dated December 14, 2005

REMARKS

Applicant has amended Claim 1, from which all other claims depend directly or indirectly, in order to clarify the present invention.

As now amended, Claim 1 is to a connection structure between a printed circuit board and a flexible circuit board, for connecting printed-side conductive patterns formed on a printed circuit board with flexible-side conductive patterns formed on a flexible circuit board. The connection structure has two or more printed-side openings provided around the printed-side conductive patterns of the printed circuit board, and two or more flexible-side openings provided in the flexible circuit board to align with the printed-side openings when the flexible-side conductive patterns are brought into contact with the printed-side conductive patterns. A frame is provided that has two or more leg parts that are inserted through the both openings, and an insulative elastic pressing member is interposed between the frame and the flexible circuit board. The leg parts have a side face and a tongue piece with a notch therebetween, and the leg parts are fixed on a bottom surface of the printed circuit board by twisting the tongue piece about the notch. Such an arrangement of a connection structure is not taught or suggested in the prior art.

Claims 1-13 have been rejected as anticipated under 35 U.S.C. §102(b) in view of Wagner (DE 4,034,650). Reconsideration and removal of that rejection are respectfully requested in view of the present amendment to Claim 1 and the following remarks.

In the Office Action, it is alleged that Wagner shows a connection structure between a printed circuit board (4) and a flexible circuit board (5) where the connection structure (FIG. 9) has side openings (30) in the printed circuit board and side openings (31) in the flexible circuit board, the structure having a frame (32) with leg parts (34) inserted through the openings and an insulating elastic pressing member (2) between the frame and the flexible circuit board, with the leg parts fixed on the bottom surface of the printed circuit board. It is also alleged that the elastic pressing member is put into the frame and has upper and lower protrusions, that a gap is provided between the frame and the flexible circuit board when the frame is fixed, and that the frame has a protrusion (38) that presses the elastic pressing member.

An important feature of the present invention, as now specified in amended Claim 1 is the formation of the leg (320) of the frame (300) with a tongue (322) and a notch (323) that enables fixing of the frame by a twisting motion of the tongue (322), as described in the present specification at page 11, lines 3-19. Twisting of the portion of the legs about the notches (see arrow A in FIG. 2) results in the frame being fixed to the printed circuit board, and the elastic pressing member, put in the holding portion of the frame, presses the flexible circuit board and printed circuit board to provide reliable conduction between respective patterns on the boards. Such an arrangement is not taught or suggested in the Wagner reference.

In view of the present amendment to Claim 1 and the above remarks, claims 1-13, as amended, are believed to be patentable and in condition for allowance, which action, at an early date, is respectfully requested.

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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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